REMARKS

Claims 1-51 are pending.

Claims 1-51 stand rejected.

Claims 1, 2, 21-23, 33-35, 38, and 39 have been amended to recite proper antecedent basis and delete redundant elements.

Claims 52-57 have been added.

The specification has been amended to correct minor, grammatical errors. No new matter has been added.

Claim Rejections - 35 U.S.C. § 102

Claims 1-8, 16-28, 32-36, 38-45, and 49-50 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,061,515 issued to Chang et al. (referred to herein as *Chang*). Applicants respectfully traverse the rejection.

Please note that former independent claims 1, 21, and 38 have been amended to depend from independent claims 52, 54, and 56.

Also, Applicants thank the Examiner for the Examiner's thorough examination of the present application.

In col. 1 of *Chang*, *Chang* makes several observations that relate to the narrow solution addressed by *Chang*. More specifically, *Chang* notes that "the data processing industry and its customers have made considerable investments in conventional data store technology, including relational databases, hierarchial databases, flat file databases, and network databases." *Chang*, col. 1, lns. 37-41. "Presently, the relational or entity-relationship model underlying relational databases is the predominant conventional method of storing data in databases." *Id.* lns. 41-43. *Chang* also notes that "object oriented technology has also gained wide acceptance due to its strengths in real world modeling, modularity, reuse, distributed computing, client/server computing, and graphical user interfaces." *Id.* col. 1, lns. 43-47.

In light of the foregoing, *Chang* identifies a problem of " the object model underlying object oriented technology and the data model underlying conventional data stores are different, and a way is needed to provide the advantages of object oriented technology while preserving the substantial investment in conventional data store technology." *Id.* col. 1, lns. 49-54. (emphasis added).

Chang also identifies a solution to the problem of "differences between object schema and data store schema." *Id.* col. 4, lns. 44-45. (emphasis added). Specifically, *Chang* states that "there is a need for a method of, and apparatus for, allowing a user to map between conventional data store schema and object schema." *Id.* col. 4, lns. 45-47.

Thus, *Chang* is not addressing the problem of "allowing application programs to access a database through an interface, wherein the interface includes knowledge of a schema of the database." Present Application claim 52. See also Present Application claims 54 and 56.

Rather *Chang* is more narrowly focused on "mapping between object schema and data store schema by use of a high level language, Schema Mapping Definition Language." *Chang*, col. 5, lns. 21-23. See also, for example, col. 7, lns. 18 and 40-41, col. 9, ln. 40, col. 39, lns. 51-58, and claim 1 preamble ("A high level language system for use by a computer system for mapping objects to a data store and for mapping the data store to the objects"). *Chang* describes in detail a Schema Mapper that "allows the user to define a mapping between a relational schema and an object schema." *Chang*, col. 11, ln. 66-col. 12, ln. 1. *Chang* specifically discusses mappings of "Table to Class, Class to Table, Column to Attribute, and Attribute to Column." *Chang*, col. 12, lns. 1-20.

In col. 19, ln. 56 through col. 21, ln. 34, *Chang* provides an example illustrating a thrust of his teachings.

> The "example illustrates a sample schema mapping definition." "There are two classes in the Object Store: employee and department." "Corresponding to these two classes, there are three tables in the relational database repository: employee, address, and department." "The schema definition of the classes, the schema definition of the tables, the schema mapping definition between the tables and classes (expressed in SMDL), and a Schema Mapping Internal Representation data structure are presented." *Chang*, col. 19, lns. 56-65.

Thus, *Chang's* narrowly focused teaching of "defining the mapping between tables and classes [and] captur[ing] the mapping configuration by generating a Schema Mapping Definition Language (SMDL) description of the mapping" (col. 9, lns. 39-42) contrasts with "a method allowing application programs to access a database through an interface, wherein the interface includes knowledge of a schema of the database" as recited in claim 52 of the present application. Furthermore, *Chang* neither teaches nor suggests "receiving a request to the interface from one of the application programs to access the database and providing to the requesting application an aggregate classifier based on classifier definitions of a schema object, wherein the schema object includes a representation of a schema of the database." *Id.*. Furthermore, *Chang* neither teaches nor suggests "receiving one or more requests from the requesting application, interrogating the schema object for location information of classifiers of the database, providing the location information of the classifiers to the requesting application, associating search constraints from a request of the requesting application with locations in the database, and generating a query to the database based on the search constraints." *Id.*

For similar reasons, *Chang* neither teaches nor suggests the invention as recited in claims 54 and 56, which recite similar relevant limitations.

In light of the above remarks, Applicants respectfully submit that claims 52, 54, and 56 are allowable. Applicants also respectfully submit that claims dependent upon claims 52, 54, and 56 are allowable for at least the same reasons as the claim(s) from which they depend.

Claim Rejections - 35 U.S.C. § 103 (*Chang & Sarkar*)

Claims 9, 29, 37, 46 and 51 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,061,515 issued to Chang et al. in view of U.S. Patent No. 6,012,067 issued to Sarkar.

Sarkar relates to a "system for the retrieval, construction, and manipulation of any kind of objects using Structured Query Language (SQL) over disparate relational storage systems on the web." *Sarkar*, Abstract.

Applicants respectfully submit that *Sarkar* does not add any relevant teachings to *Chang* with respect to independent claims 52, 54, and 56. Thus, Applicants also respectfully submit that

claims 9, 29, 37, 46 and 51 are allowable for at least the same reasons as the independent claim from which they depend.

Claim Rejections - 35 U.S.C. § 103 (*Chang & Carey*)

Claims 11, 13, 31, and 47-48 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,061,515 issued to Chang et al. in view of U.S. Patent No. 6,134,540 issued to Carey et al.

Carey pertains to "an object language application (e.g., C++, JAVA, Etc.) [which] issue[s] a query over a view and to receive back, as query results, handles to application type objects which can be further manipulated by the application." *Carey*, Abstract.

Applicants respectfully submit that *Carey* does not add any relevant teachings to *Chang* with respect to independent claims 52, 54, and 56. Thus, Applicants also respectfully submit that claims 11, 13, 31, and 47-48 are allowable for at least the same reasons as the independent claim from which they depend.

Claim Rejections - 35 U.S.C. § 103 (*Chang, Sarkar, & Carey*)

Claims 10, 12 and 30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,061,515 issued to Chang et al. in view of U.S. Patent No. 6,012,067 issued to Sarkar and further in view of U.S. Patent No. 6,134,540 issued to Carey et al.

Applicants respectfully submit that *Sarkar* and *Carey* do not add any relevant teachings to *Chang* with respect to independent claims 52, 54, and 56. Thus, Applicants also respectfully submit that claims 10, 12, and 30 are allowable for at least the same reasons as the independent claim from which they depend.

CONCLUSION

In view of the amendments and remarks set forth herein, the application is believed to be in condition for allowance and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the examiner is requested to telephone the undersigned.

I hereby certify that this correspondence is being transmitted via facsimile to (703) 746-9099, on October 28, 2003.

KBC — Oct. 28, 2003

Attorney for Applicant(s) — Date of Signature

Respectfully submitted,

KBC

Kent B. Chambers
Attorney for Applicant(s)
Reg. No. 38,839

RECEIVED
CENTRAL FAX CENTER
OCT 29 2003

OFFICIAL